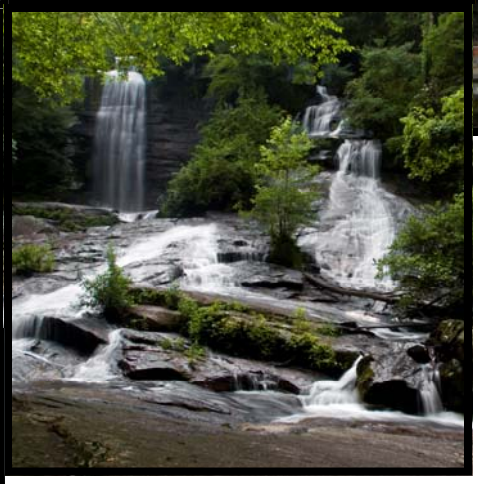
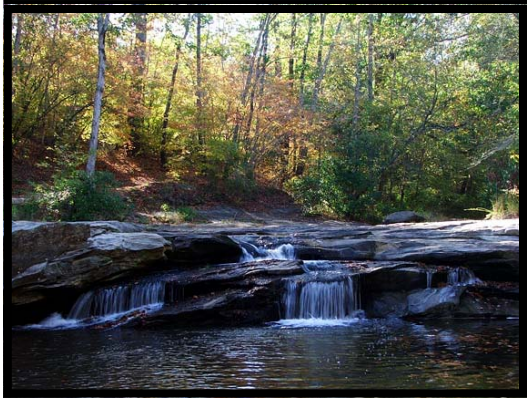




# Region 1
# FY 2007
# Annual Report

D H E C

PROMOTE PROTECT PROSPER

South Carolina Department of Health
and Environmental Control

# Table of Contents



On the cover L to R: Downtown McCormick County; Abbeville Opera House; Edgefield Courthouse; Anderson University; Twin Falls Oconee County; Lake Greenwood; Saluda Museum and Theater; Horseshoe Falls at Musgrove Mills in Laurens County.

# Sites

**Abbeville County Public Health Department**
**(864) 366-2131**
Home Health Services 366-2718
905 W. Greenwood Street
Abbeville, SC 29620

**Anderson County Public Health Department**
**(864) 260-5541**
Home Health Services 260-5617 or
220 McGee Road 1-888-260-5617
Anderson, SC 29625

**Edgefield County Public Health Department**
**(803) 637-4035**
Home Health Services 637-4107
21 Star Road
Edgefield, SC 29824

**Greenwood County Public Health Department**
**(864) 942-3600**
Home Health Services 942-3631
1736 South Main Street
Greenwood, SC 29646

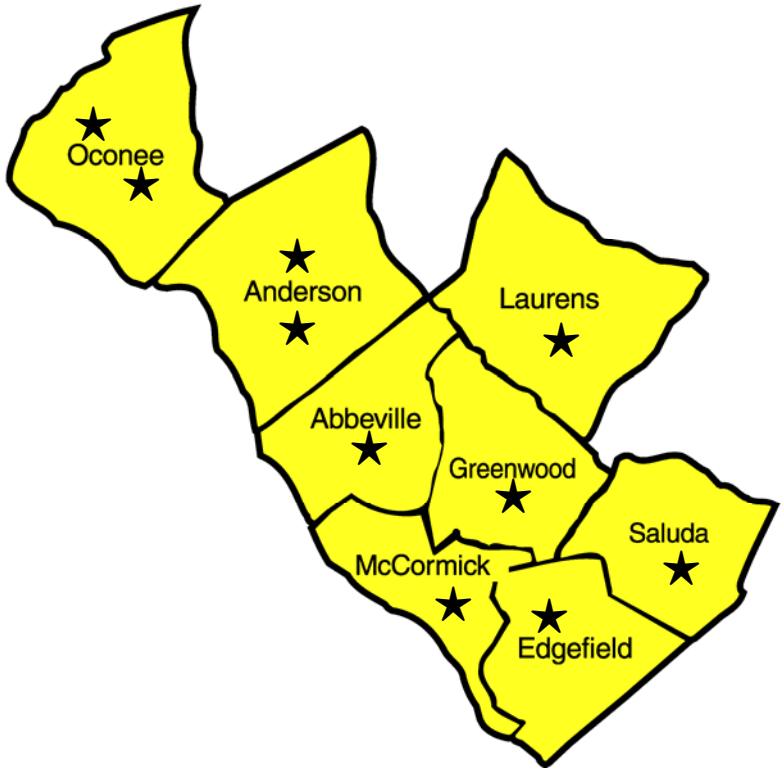
**Laurens County Public Health Department**
**(864) 833-0000**
Home Health Services 833-5883
93 Human Services Road
Clinton, SC 29325

**McCormick County Public Health Department**
**(864) 465-2511**
Home Health Services 465-2513
204 Highway 28
McCormick, SC 29835

**Oconee County Public Health Department**
**200 Booker Drive (864) 638-4170**
Walhalla, SC 29691
**609 North Townville Street (864) 882-2245**
Seneca, SC 29678
Home Health Services 1-800-260-5617

**Saluda County Public Health Department**
**(864) 445-2141**
Home Health Services 445-7041
613 Newberry Highway
Saluda, SC 29138

**Westside Community Center**
**(864) 231-1791**
1100 West Franklin Street
Anderson, SC 29624



D H E C

PROMOTE PROTECT PROSPER

South Carolina Department of Health and Environmental Control

# Region 1 Public Health


Anderson Headquarters
220 McGee Road
Anderson, SC 29625
(864) 260-5541

Greenwood Headquarters
1736 South Main Street
Greenwood, SC 29646
(864) 942-3600


## A Message from the Health Director

Dear Fellow Professionals,

This document is designed to inform our stakeholders and partners about our public health successes, activities, emphasis on quality, and our opportunities for partnering. We value our customers and are constantly looking for ways to improve services. Through our efforts, we especially want to make our communities even better places to live, work and play. We are fortunate to live in counties that care and are willing to share resources for the improvement of quality of life. Region 1 counties include Abbeville, Anderson, Edgefield, Greenwood, Laurens, McCormick, Oconee, and Saluda.

South Carolina is blessed with one of the finest public health infrastructures in the nation. Despite our struggles with decreasing resources, staff turnover and changes in Medicaid reimbursement, Region 1 has experienced successes in several areas. We continue to make great strides in building relationships with other agencies charged with homeland security. Surveillance of public health issues has prompted us to act quickly to contain the spread of diseases. Data analysis and community collaboration have aided us in planning interventions designed to lower our infant mortality rates.

On behalf of the employees of our region, I am pleased to present to you the 2007 DHEC Region 1 Annual Report. We are committed to serving everyone who lives in or visits our eight counties. We strive to provide the best possible customer-driven services. Please do not hesitate to call or visit us for a service or a potential partnership.

Sincerely,

Becky F. Campbell

Becky F. Campbell, RN, PhD
Health Director

**South Carolina Department of Health and Environmental Control**
**Region 1**
Serving Abbeville, Anderson, Edgefield, Greenwood, Laurens, McCormick, Oconee and Saluda Counties

# Who We Are

## DHEC's Mission

To Promote and Protect the Health of the Public and the Environment.

### *DHEC's Values*

**Use of Applied Scientific Knowledge for Decision Making**:
We are committed to the use of rational methods and scientific knowledge to provide answers to guide our professional judgment.

**Cultural Competence:**
We are committed to cultural competence by recognizing, respecting, understanding, accepting, and valuing different cultures in order to provide effective services to all our customers.

**Customer Service:**
We are committed to meeting or exceeding customers' identified needs and expectations with quality service.

**Excellence in Government:**
We are committed to being an organization that is quality-focused and customer-driven. We build awareness of health and environmental issues with citizens by using more effective means of informing and educating the public.

**Local Solutions to Local Problems:**
We are committed to cooperation and collaboration within our agency and with local resources to develop healthy communities that are active in improving their own health and environment.

**Teamwork:**
We are committed to working together to make decisions and reach common goals.

### What is Public Health?

To some, public health is a county nurse, immunizations, or tuberculosis control; to others, it is a sanitation program. Its image is different to each person, but its services are provided for all. Public health is all these things and more. It is a combination of many personal and environmental programs, services for prevention of diseases and services for promoting the well-being of the community. Along with individual health, public health is concerned with population health. As such, DHEC is responsible for assessments of health.

### What is DHEC's Role in Public Health?

The South Carolina Department of Health and Environmental Control (DHEC) is the state government agency tasked with promoting and protecting the health of the public and the environment. This responsibility is too big for one entity to perform alone, thus it requires DHEC to work in a cooperative spirit with the federal government, other state agencies and local communities throughout each of the 46 counties in this state. To assist in this effort and based upon geographical location, DHEC has grouped the 46 counties into eight regions.

# Fiscal Year 2007 Highlights

| Program | Abbeville | Anderson | Edgefield | Greenwood | Laurens | McCormick | Oconee | Saluda | Total |
|---|---|---|---|---|---|---|---|---|---|
| Animal Bite Incident Reports (Calendar Year 2007) | 78 | 436 | 41 | 246 | 166 | 23 | 135 | 46 | 1,171 |
| BabyNet Referrals | 25 | 206 | 15 | 95 | 78 | 5 | 93 | 15 | 532 |
| Birth Certificates Issued | 1,335 | 8,108 | 683 | 5,043 | 3,617 | 467 | 3,056 | 835 | 23,144 |
| Children's Rehabilitative Services Clients | | | | | | | | | 724 |
| Death Certificates | 1,308 | 15,332 | 956 | 7,521 | 4,670 | 404 | 5,394 | 778 | 36,363 |
| Dental Patients | | 181 | | | | | 302 | | 483 |
| Family Support Services Unduplicated Patients | 1 | 267 | 8 | 231 | 31 | 2 | 163 | 6 | 709 |
| Food Protection Field Activities | 307 | 2,277 | 297 | 1,265 | 796 | 210 | 849 | 273 | 6,274 |
| Permitted Food Service Establishments | 73 | 641 | 69 | 270 | 194 | 51 | 236 | 57 | 1,591 |
| Home Health Services Unduplicated Patients | 54 | 534 | 16 | 43 | 160 | 42 | 85 | 134 | 1,068 |
| Home Health Visits | 1,293 | 13,185 | 388 | 896 | 3,878 | 776 | 2,068 | 3,232 | 25,853 |
| Immunizations | 1,503 | 15,697 | 1,538 | 3,295 | 5,476 | 660 | 6,845 | 1,128 | 36,142 |
| Lab Tests | 4,292 | 22,515 | 2,667 | 7,762 | 7,193 | 1,795 | 7,654 | 3,746 | 57,624 |
| Postpartum Newborn Home Visits | 170 | 988 | 114 | 605 | 410 | 54 | 337 | 171 | 2,849 |
| Rabies Prevention Field Activities (Calendar Year 2007) | 256 | 1,096 | 102 | 780 | 416 | 76 | 390 | 84 | 3,200 |
| STD/HIV (Preventive Health) | 601 | 8,224 | 530 | 2,510 | 2,654 | 481 | 1,110 | 845 | 16,955 |
| Septic Tank Permits | 129 | 882 | 161 | 113 | 363 | 51 | 737 | 134 | 2,570 |
| Tuberculin (TB) Cases | 1 | 4 | 2 | 0 | 4 | 0 | 1 | 0 | 13 |
| Tuberculin (TB) Tests | 144 | 1,542 | 50 | 960 | 682 | 56 | 659 | 32 | 4,125 |
| Wastewater Field Activities | 461 | 3,356 | 661 | 707 | 1,183 | 217 | 2,124 | 498 | 9,207 |
| WIC Encounters | 4,409 | 21,074 | 3,817 | 13,878 | 11,498 | 1,403 | 10,850 | 4,458 | 71,387 |
| Women's Health Services Visits | 1,298 | 6,368 | 1,332 | 2,557 | 3,136 | 652 | 4,625 | 1,888 | 21,856 |

# County Demographics

| County/state | 2000 Census Population | 2000 Population Details | 2004* Median Household Income | 2007 ** Children On Medicaid | 2006 * Population Estimate | 2006 * Population Estimate Details |
|---|---|---|---|---|---|---|
| Abbeville | 26,167 | 68.3% White<br>30.3% Black<br>.8% Hispanic | $34,362 | 3,133 | 25,935 | 69.8% White<br>29.1% Black<br>1.1% Hispanic |
| Anderson | 165,740 | 81.6% White<br>16.6% Black<br>1.1% Hispanic | $38,667 | 18,685 | 177,963 | 81.6% White<br>16.7% Black<br>1.8% Hispanic |
| Edgefield | 24,595 | 56.8% White<br>41.5% Black<br>2% Hispanic | $36,009 | 2,747 | 25,261 | 58.8% White<br>39.8% Black<br>2.4% Hispanic |
| Greenwood | 66,271 | 65.6% White<br>31.7% Black<br>2.9% Hispanic | $35,918 | 8,388 | 68,213 | 66% White<br>31.7% Black<br>4.4% Hispanic |
| Laurens | 69,567 | 71.6% White<br>26.9% Black<br>1.9% Hispanic | $33,156 | 8,228 | 70,374 | 72.9% White<br>25.5% Black<br>3.1% Hispanic |
| McCormick | 9,958 | 44.8% White<br>53.9% Black<br>.9% Hispanic | $31,478 | 966 | 10,226 | 49.1% White<br>49.8% Black<br>.9% Hispanic |
| Oconee | 66,215 | 89.1% White<br>8.4% Black<br>2.4% Hispanic | $39,415 | 7,853 | 70,567 | 90.4 White<br>8% Black<br>3.3% Hispanic |
| Saluda | 19,181 | 65.8% White<br>30% Black<br>7.3% Hispanic | $34,771 | 2.573 | 19,059 | 70.8% White<br>28.4% Black<br>12.6% Hispanic |
| **State** | 4,012,012 | 67.2% White<br>29.5% Black<br>2.4% Hispanic | $39,454 | 502,308 | 4,321,249 | 68.5% White<br>29% Black<br>3.5% Hispanic |

* Data Source 2006 US Census Bureau State and County QuickFacts
** Data Source 2007 SC Kids Count

# Tied for the Highest Infant Mortality Rate in South Carolina

In order to determine the cause of Region 1's high infant mortality rate, an Infant Mortality Task Force was assembled. Utilizing a statistical process (PPOR-Perinatal Periods of Risk) of data gathering, Region 1 was able to identify opportunities for improvement in four priority areas: hypertension (pre-pregnancy and pregnancy induced), smoking, unsafe sleeping, and SIDS.

Once these risks were identified, sub-committees began researching best practices, interviewing community focus groups, implementing surveys and organizing a community forum.

The forum was well attended by community leaders, private and non-profit organizations and the local medical community. Information related to risks, research data, and task force plans were shared with the group. The community responded with requests to participate in task force plans and with appreciation for work already completed.


A two-part campaign for decreasing infant mortality was developed. Phase I, entitled "Sleep Safe, Baby," is designed to raise awareness of health care providers and the general public about unsafe sleeping practices contributing to infant deaths in Region 1. Information will be provided to the public by press releases, press conferences, public service announcements, billboards, fliers, pamphlets and radio ads.

Phase II, entitled "Team Together-Reducing Infant Mortality," is a campaign targeted to health care


providers regarding safe sleep practices recommended by the American Academy of Pediatrics. This effort will assure a consistent message, "The ABC's of Safe Sleep" (Alone, on Back, in a Crib). Information will be provided in train-the-trainer sessions using toolkits designed for hospital staff, OB and pediatric providers, day cares and faith organizations. The South Carolina chapter of the March of Dimes is providing funds for this two-part campaign.

There has been outstanding support from the community and our community partners in implementing the "Safe Sleep" campaign. Although there is no official data to show progress in infant mortality rate, this campaign has pulled the community together to work toward a common goal. There have been many new contacts made as well as new partnerships and opportunities for agencies and providers to learn what services are being provided in the community and what the needs are. This increased knowledge has enhanced the respect and admiration the community has for DHEC and the March of Dimes in their efforts.

Other health department activities include establishing a Preconceptional Health Care Committee to research needs and develop goals and activities to increase the public's awareness of the need for preconceptional care. One of these activities has been adopted by DHEC's central office: the development of a looped video with health care messages to include "Give Your Baby Room to Breathe." These educational messages will be shown in health department waiting areas throughout the state as well as in the waiting areas of community medical partners.

# Meeting Environmental Health Needs

The SCDHEC Strategic Plan 2005-2010 contains strategic goals that directly apply to Environmental Health activities. One of these goals is to *Reduce direct and indirect loading of pollutants to surface waters and ground waters.* Another strategic goal is to *Protect the public against food-, water- and vector-borne diseases.*

Regulations require that, where public sewer is not available, DHEC staff evaluate building sites to determine the suitability for the issuance of a "Permit to Construct" an individual septic tank, issue permits to construct (when conditions are suitable), inspect septic tank installations, investigate illegal discharges of septage and initiate the enforcement actions that may result from the investigations.

Building sites proposed for septic tank systems are becoming more difficult to evaluate. As the demand for development increases, the availability of suitable sites decreases. Also, larger dwellings are being constructed on smaller sites which place greater demands on site conditions and septic tank system design. These factors contribute to the increase in time required per site for evaluation and design.

Many counties require a septic tank permit before a building permit can be issued. Therefore, site evaluation and septic tank system permitting are of great economic importance to the state's development and the home building industry. For these reasons, it is essential that septic tank system evaluation and design be conducted thoroughly, correctly and in a timely manner.

The septic tank program is driven by public demand. When staffing levels are inadequate, response times for the issuance of septic tank permits are often long. This results in complaints from the public.

Food-borne illnesses are an ever-present threat. Food-borne outbreaks have a negative impact on health. However, there is also a negative economic impact related to tourism. To better minimize the threat of food-borne illnesses, regulations require that DHEC staff conduct risk-based inspections of food service facilities and provide training to operators to help them identify and control risk factors.

The food service industry in South Carolina has exhibited a growth rate of more than two percent each year. Staffing levels have not increased accordingly. Our capacity to increase the frequency of inspections per facility and to provide necessary operator training has been negatively impacted, thereby limiting our ability to enhance the protection of the public's health from food-borne illnesses.

*Photo shoot compliments of Bi-Lo on Highway 24, Anderson.*

# Employee Health Services

Employee Health Services are provided for all employees in Region 1. The scope of services includes pre-employment tuberculin screening, new employee orientation, wellness education/ promotion, management of work related injuries/ exposures; education/training regarding OSHA Bloodborne Pathogen Standard, hazard communication, respiratory protection and tuberculosis. Also included are immunizations and respiratory fit testing.

Each new employee attends an educational session provided by the Regional Employee Health Nurse (EHN). They learn about bloodborne pathogens and how to protect themselves. In addition, safety and health promotion policies are discussed. Immunizations are provided if the employee is not up to date, including immunizations for measles, tetanus, pertussis, hepatitis B, influenza and chicken pox.

All employees receive or provide proof of tuberculosis screening prior to employment. This is to start a baseline for the employee in case there should be an exposure on the job and to protect the public from exposure by the health care worker. Tuberculosis testing for employees working directly with TB patients is provided on an annual basis, or more often if needed. Respiratory fit testing is provided for staff who investigate and work with potential infections that are spread by breathing in the infectious agent (tuberculosis, pertussis, flu, etc.).

The EHN provides ongoing wellness information and education. Annual wellness screens, smoking cessation education and follow-up are also provided. Assistance is offered to set up a wellness program in each site.

On-the-job injuries are a responsibility of the EHN. She provides or arranges for direct care of accident victims involving incidents such as chemical exposure, falls, strains, car accidents, and/or blood and body fluid exposures. The EHN coordinates the workers compensation program and serves as the liaison between all involved. The goal is to get appropriate care for the employee so they can return to their job as soon as possible.

Managing the Employee Health Program in an eight county region is a challenge. Other county employees assist the EHN in assuring services throughout the region. With a team approach, the health needs of employees are addressed. Healthy employees give healthy customer service.

# Chronic Disease Prevention Progress

Region 1's Chronic Disease Risk Reduction team continues to promote and develop standards of excellence within the community. During 2007 the team has focused on implementing best practices within the area of smoking cessation. Region 1 leads the way with a system of training healthcare providers to implement the US Public Health Service's *Treating Tobacco Use and Dependence Clinical Practice Guideline*. Over the past year, five additional physician practices have been trained to implement this program. Over seventy healthcare providers including physicians, nurses and medical staff have received the training. Region 1 has initiated training to date in the following counties: Anderson, Oconee, Greenwood, Abbeville, Laurens, and Edgefield. Physician offices report depleted supplies of counseling and reference materials in their office and often find that patients will take the materials, yet still do not admit to tobacco use. Region 1 has worked with pediatric, ob-gyn, and family practice as well as residency programs and hospitals to establish relationships to assist them in implementing the most up-to-date research to help patients. Region 1 continues to work to expand the reach of the Clinical Practice Guidelines and has recently partnered with Lander University in Greenwood to have the guidelines included in their nursing curriculum.


American Heart Association

Engaging the faith community is a new direction for Region 1's Chronic Disease Risk Reduction team. Although working with churches is not a new arena, having programs targeted to a faith setting is new. We have partnered with the American Heart Association to provide churches with health ministries tools to assist them with the promotion of health within their communities. One such tool is the *Search Your Heart* curriculum. It addresses four key health issues – nutrition, physical activity, heart disease and stroke, and screenings. Region 1 is currently working with three churches in Laurens County that have implemented the *Search Your Heart* curriculum. Another curriculum that addresses health through faith communities includes *Body and Soul*, a program developed by the National Cancer Institute and partners. *Body and Soul* is a healthy eating and physical activity program aimed to reduce the incidence of cancer in African Americans. This past year, Region 1 has conducted training sessions in Anderson and Greenwood in conjunction with community partners.

We are constantly looking for new community partners to expand our reach. Our goal is to reach out to as many different groups and individuals as possible.

# Region 1 Flu Vaccination – Reaching Minorities

An important goal identified in the DHEC Strategic Plan is to eliminate health disparities. When certain subgroups of a population suffer greater burdens of disease and death, the entire population suffers. DHEC Region 1 is working to reduce health disparities in communicable and chronic disease outcomes, especially in the area of flu vaccinations.

Studies have shown that minorities are less likely to receive flu vaccinations. For the last decade, Region 1 has made every effort to make vaccines easily accessible to all high risk groups and the population at large. To reach as many people as possible, mass flu clinics and collaborative efforts with local businesses, churches and health care providers have been promoted.

In 2007 after flu clinics had been held in the Region, a statewide review of the populations getting flu shots revealed that minorities were not getting flu vaccinations. Regions were asked to develop and implement plans to reach minorities. Region 1 staff approached partners in the community to assist with the efforts. Working with parish nurses, flu clinics were held at local African-American churches. Flu shots were provided to an increased number of senior congregate dining areas, assisted living facilities and adult day care centers. Vaccine was given to the local free clinics and clinics serving migrant workers to increase access among these often underserved populations. Oconee County successfully held an all day mass clinic at Wal-Mart. In addition, several health departments serving the larger counties in Region 1 added "after hours" mass clinics. One of the most effective strategies was to offer flu shots to every client coming in the door at all our clinic sites. The inability to pay was eliminated as a barrier to access. Because many minorities had never received a flu shot in the past, a great deal of education for the need became an important strategy.

In 2006 over 14,000 flu shots were administered with 9 percent of these received by African Americans. Even though fewer overall shots were given in 2007 (not quite 13,000) of those given 10 percent were administered to African-Americans. Because late attempt efforts proved to be effective, early planning has begun for next year's flu campaign in an effort to increase the number of minorities vaccinated.

# DHEC Health Services Performance Management System

South Carolina continues to have poor health status outcomes statewide. As a result, DHEC has an increased demand for quality services to address these outcomes. With this comes the increased demand and accountability for use of scarce public health resources. Emerging public health threats impacting today's society require a high-performing public health agency.

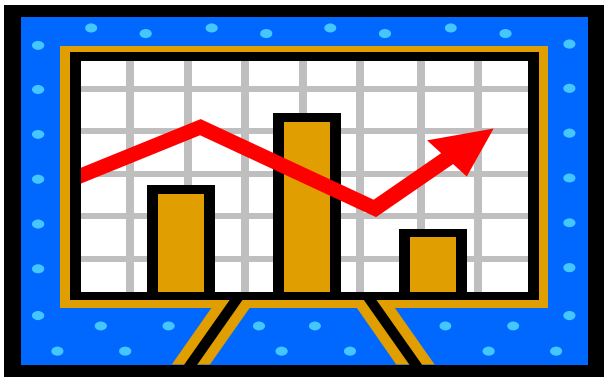
DHEC Health Services has realized that implementing a Performance Management System is critical in order to maximize public health's effectiveness. Performance Management is what we do with the information we gather from measuring performance across health services and within the regions. Performance management:

- identifies key performance areas
- establishes performance standards and guidelines for their use
- sets priorities
- establishes objectives
- measures progress on meeting objectives
- conducts continuous quality improvement (CQI)
- holds everyone accountable for improving performance.

Region 1 is well on the way to implementing performance management within the region. All staff members within the region have been provided training and education regarding the statewide Performance Management System. Region 1 leadership has made implementing performance management for quality improvement a priority and is working with local staff to increase their understanding of the system and elements involved in continuous quality improvement.

Regional Performance Standards have been established which facilitate our ability to select appropriate health indicators, set goals and to communicate this with frontline staff. We have worked to refine our health indicators and define how we will measure performance. Data collection systems are in place to collect relevant data to measure performance and to feed data to appropriate management and other staff. Regional management then uses this data to conduct appropriate quality improvement activities.

The Public Health Community Systems (PHCS) area has been on the cutting edge in developing data systems, one of which is being considered as a



model for the state. Local staff identified a need for readily accessible data and created a database to meet this need. PHCS has gone to great lengths to involve staff in understanding the principles involved in continuous quality improvement and engages them in the process. Managers and frontline staff have begun to set their own standards for performance to improve the quality of service they deliver.

Within the nursing area, management identified some concerns with standardization of processes across the region and applied specific continuous quality improvement processes to analyze this situation and develop quality improvement plans to address the issue. Environmental Health implemented specific strategies to collect service delivery data, analyze this data, and make changes that improved service delivery efficiency and effectiveness. Administration is in the process of analyzing policies and procedures that impact internal operations.

The systematic implementation of Region 1's Performance Management System has brought to light several common issues across programs and disciplines. One of the issues identified has been the need for consistent sharing of information with appropriate staff, improved communication across and within programs, involvement of staff at the lowest level in data gathering and analysis, and the need for consistent and timely data gathering.

Performance Management in Region 1 is in its infancy at this point but we expect major strides over the next year. Staff is excited about applying a scientific approach to what they do and being able to set goals, monitor progress, and see visible movement toward stated goals. We in Region 1 are committed to public health and will utilize the tools available to us to improve the health outcomes in South Carolina.

# Public Health Preparedness – An Exercise

Public health preparedness is equipping the public health workforce to effectively and efficiently respond to an act of bioterrorism, infectious disease outbreaks, or other public health threats and emergencies. Region 1 Public Health is committed to fulfilling this statement.

In an effort to meet this goal, Region 1 Public Health has written numerous emergency plans which enable participating institutions and agencies to meet local, regional and state needs in a collaborative and organized manner in the event of bioterrorism, infectious disease outbreaks and other public health threats. These plans also cover chemical, biological, radiological, nuclear, and explosive incidents that may involve large numbers of affected individuals.

As with all planning efforts it is equally important to perform simulated drills or exercises to ensure the integrity of these planning efforts. One such exercise was held November 28, 2007 as part of the Region's Pandemic Influenza preparedness goals.

EnviroSafe Consulting and Investigations, Inc. (EnviroSafe), along with the Regional Public Health Preparedness Director and the Associate Public Health Preparedness Director, came together to develop a comprehensive exercise to evaluate the overall preparedness of hospitals, public health, and other supporting agencies in the region. Primarily, this exercise was designed to build on skills learned from Phases I and II of the CDC Pandemic Influenza grant training and exercise program and to test the various skills and abilities of different organizations and jurisdictions. In addition, it was designed to test inter-agency cooperation across different disciplines and jurisdictions in developing strategies and sharing information to ensure a coordinated regional response to a pandemic influenza outbreak. Furthermore, the exercise allowed participants to learn more about the

variety of communication systems available for use during such an event and develop additional strategies for communicating across jurisdictional lines.

This tabletop exercise provided a realistic scenario with information that allowed participants to evaluate existing plans and procedures for responding to and managing the many needs that will arise from an event, such as pandemic influenza. In addition, the exercise was designed to identify opportunities for improving the Region's overall preparedness for an event involving the known transmission of a pandemic virus.

The exercise started nine days prior with a series of injects emailed to various participating agencies. These email injects were designed to initiate any actions that agencies felt necessary before the formal meeting of participants at the Greenwood County Civic Center on November 28, 2007. With approximately 210 participants representing a variety of agencies, i.e. hospitals, Fire, EMD, Red Cross, Public Safety, School and Universities, Coroner's Office, EMS, Law Enforcement, and Public Health, the exercise was successful in identifying gaps, understanding agency and public responsibilities, and continuing interagency emergency preparedness collaboration.

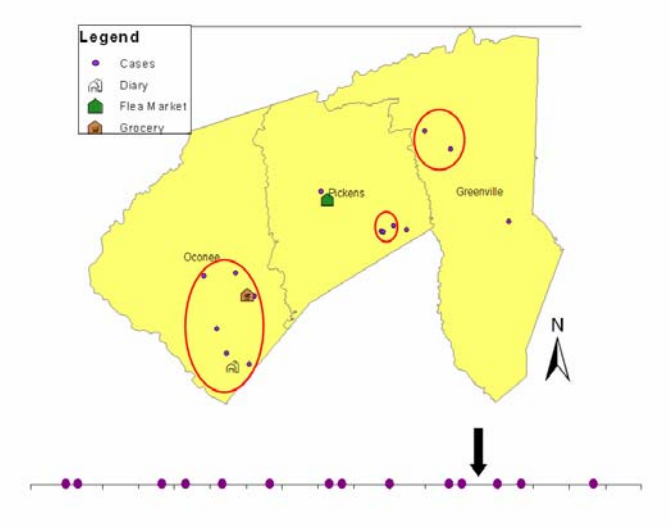
# Raw Milk Consumption

In 2007, between April and June, Region 1 and Region 2 noticed an increase in campylobacter cases which public health officials later attributed to raw milk consumption.

Campylobacter, otherwise known as campy, causes gastroenteritis. Infection occurs by ingestion of contaminated food or by direct contact with fecal material from infected animals or people. Improperly cooked poultry, untreated water, and unpasteurized milk have been the main vehicles of transmission.

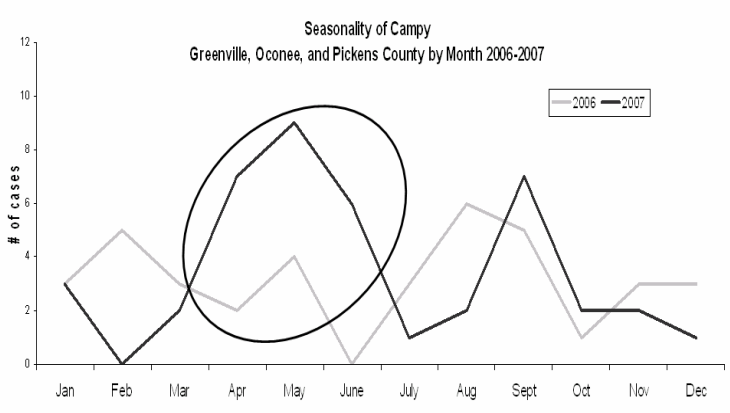
The epidemiology teams from Region 1 and 2 worked to identify this cluster and determine the cause. Counties affected were Oconee, Pickens, and Greenville.

In April 2007 the Bureau of Labs isolated campylobacter from the sample of milk obtained at a flea market submitted by a hospitalized patient with campylobacter in Pickens County.




In May 2007 investigators interviewed other individuals ill with campylobacter. It was found that they all reported drinking milk purchased at the same flea market. Eleven cases were found in Greenville, Pickens and Oconee counties. Ill individuals reported drinking raw milk purchased either from the flea market in Pickens County or a grocery store in Oconee County. A common dairy supplied the raw milk to both sites.

The following graph shows the seasonality of campylobacter cases in the upstate. A decrease in cases is noted in the winter and spring. The peaks in Region 1 and 2 are in the summer and fall.




In conclusion, there was one sentinel county – Pickens County— that identified the cluster. It was unusual to see this many cases of campylobacter for the time of year. There was one common large event, a weekly flea market, and a common item purchased and consumed.

A case-control study was conducted by the health department following this outbreak and it was determined that Campylobacter jejuni infection was significantly associated with the consumption of unpasteurized milk.

# Using CQI Process to Ensure OASIS Accuracy in Home Health

With the recent changes to the Prospective Payment System that were implemented by Medicare, the importance of Outcome Assessment Information Set (OASIS) accuracy in Home Health Care is more vital than ever. This data is used to evaluate patient outcomes, for planning and coordination of care, for formulating case mix information, and for reimbursement for services.

In an effort to ensure accuracy of our OASIS data, Region 1 has made several important strides in the last year. A full time Continuous Quality Improvement (CQI) coordinator has been hired, and we are conducting a region-wide Outcome Based Quality Improvement (OBQI) blitz using the CQI process to ensure clinicians accurately reflect the patient's condition. All clinical staff members have attended an in-service reviewing all of the OASIS questions and the Medicare guidelines for answering them appropriately. Central office has purchased an OASIS software package which gives sample scenarios for staff to review and answer. The scenarios are then discussed between the clinicians so there can be a better understanding of the appropriate

answers to the OASIS questions. The CQI coordinator and the Clinical Supervisors review the OASIS questions and answers on patients at admission and discharge to determine if any trends appear. Once a particular trend has been established and best practice interventions are in place, the re-evaluation and re-training begins as is the cyclical nature of the CQI/OBQI process.

The ultimate goal for the home health agency is to assist each patient to improve his or hers quality of life and remain in the community. It is the hope of the agency that the patient's ability to self-manage will improve or at least stabilize as a result of the intervention of the home health clinicians. Because of the impact this information has on the community we serve and the fact that outcomes will be tied to payment, it is vital that home health agencies ensure the OASIS data is accurate.

# Region 1 Receives New State Diabetes Funds

Region 1 is one of five regions in the state to receive money allocated in the state budget to address diabetes and disparity. The five regions were chosen based on diabetes and obesity prevalence data from the South Carolina Behavioral Risk Factor Surveillance System (BRFSS) report and the percent of African-American population. The prevalence of diabetes among adults in Region 1 is 10.6 percent which is higher than the state rate of 9.6 percent.

With these new, recurring funds, a registered nurse and registered dietician have been hired to do diabetes education/systems work in Abbeville, Edgefield, Greenwood McCormick, and Saluda counties. Edgefield County is the initial target county for diabetes initiatives. The Region has also contributed funds for a half-time health educator to assist with the project.

The state Diabetes and Disparities Program has identified three goals to be addressed.

**Goal 1: To improve self-care of people with diabetes through Diabetes Self-Management Education (DSME) in areas of the state that do not have access to the services.**

The new RD and RN will establish a DSME site recognized by the American Diabetes Association within 1 year.

**Goal 2: To increase community awareness of the obesity risk factor of nutrition and physical activity as well as risk factors and management of diabetes.**

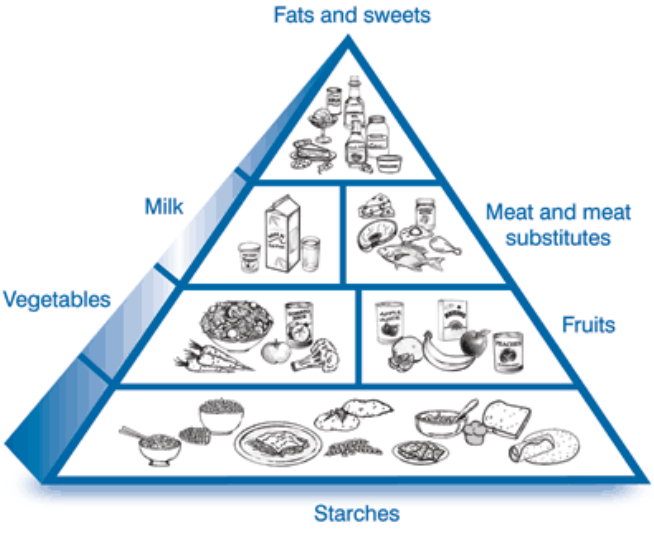
One program we promote is Diabetes 101. It is an interactive community presentation that targets the general population at risk for diabetes, adults with diabetes and family or friends who are caregivers for adults with diabetes. This program identifies diabetes risk factors, need for early diagnosis and self-care to prevent complication of diabetes.

Another program we promote is The Body & Soul program. It is an evidence-based program developed by the National Cancer Institute and endorsed by the American Diabetes Association (ADA) and the American Heart Association (AHA). The program is designed for African-American churches to reduce the risk factors of high blood pressure, diabetes, heart disease, stroke and many types of cancer.

**Goal 3: To improve healthcare provider awareness of current standards of care and testing for people with diabetes, cardio metabolic risk factors and diabetes.**

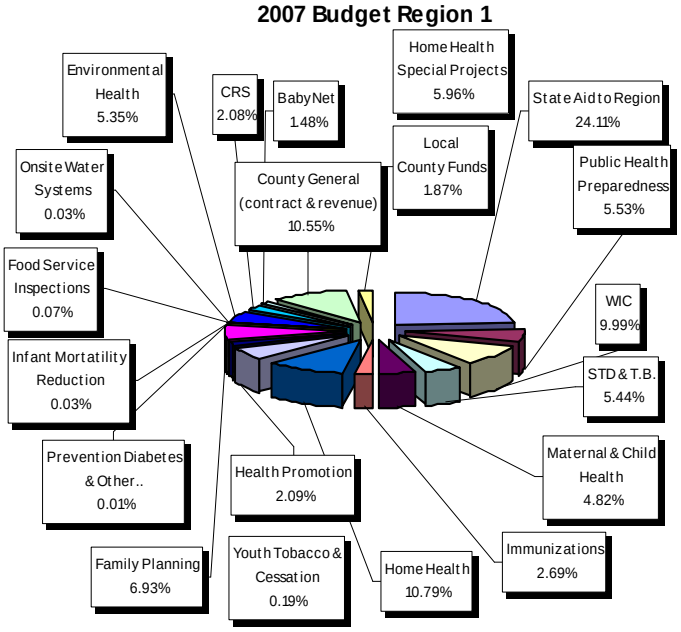
The target audience of this goal will be physicians, their office staff, and school nurses. Healthcare providers will be offered training and technical assistance by the diabetes staff and other organizations offering diabetes management training.

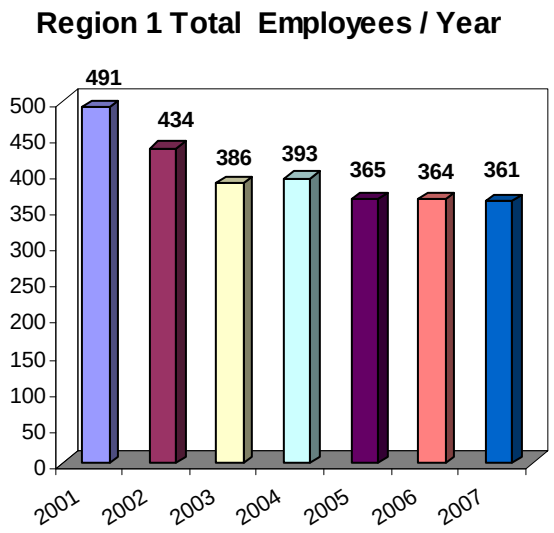
DHEC Region 1 is excited about the opportunity to work with citizens and healthcare providers to address diabetes issues in our communities. Using evidence-based tools and grassroots' involvement we strive to improve prevention efforts, self-care, and treatment options.

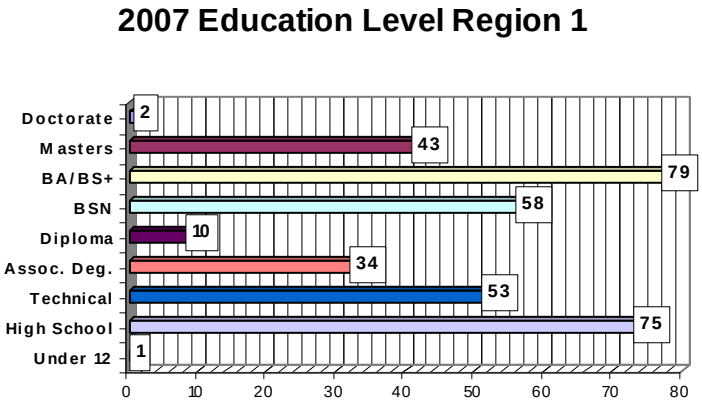


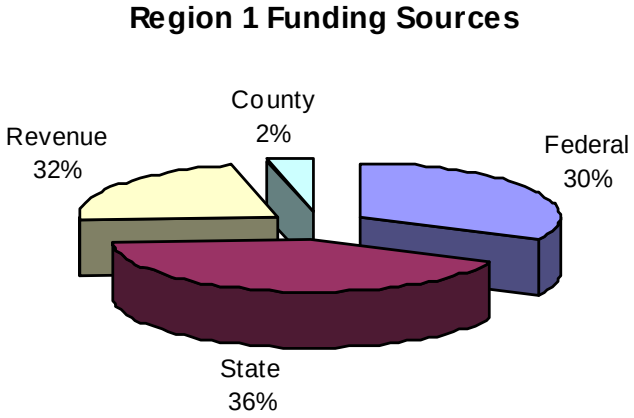
# 2007Administrative Overview

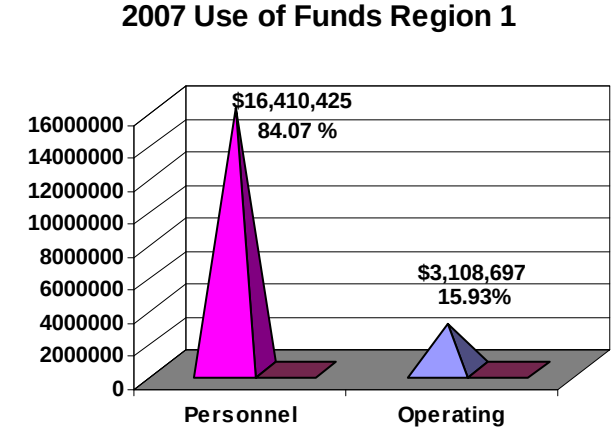
We often get questions about our funding sources, the type of services we provide, and the educational background of our personnel. Graphs are included to help address those questions. We receive federal, state, and county funding as well as revenue from Medicaid, Medicare, third party, and private pay. As the population and area grows, and difficult employment times hit, the need for our services increases, yet resources to deal with those needs dwindle. We are fortunate to have well-qualified and dedicated employees to provide the highest quality of customer service possible. With state budget cuts and decreased home health services, our financial situation has changed over the last few years. We anticipate continued fluctuation in the coming years.

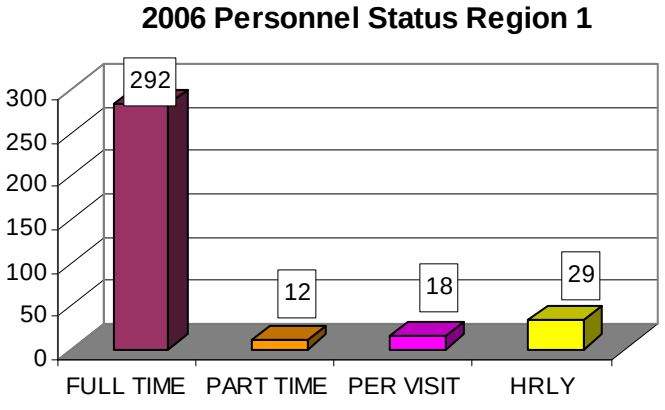


# Health Indicators

**Goal: Improve the quality and years of healthy life for all.**

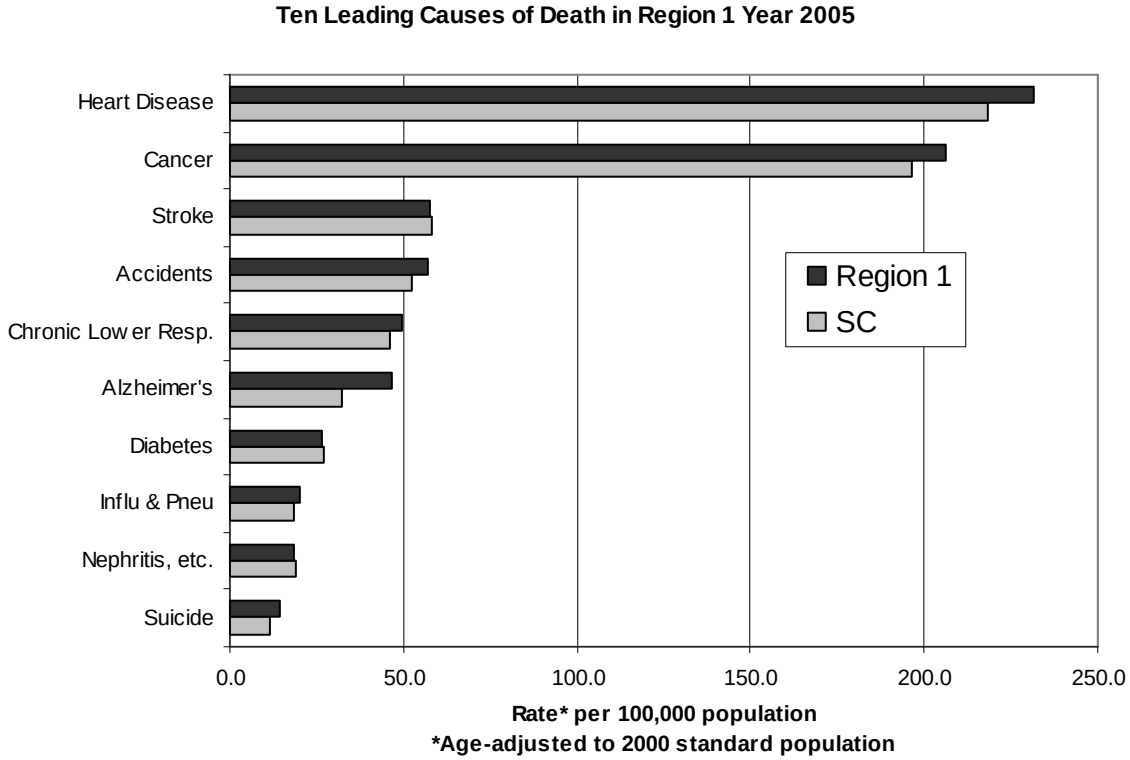
The primary goal of a healthy community is to ensure individuals of all ages have a long and healthy life. Examining leading causes of death and monitoring their trends in our population aid the community in addressing emerging health concerns and evaluating program areas.

## Leading Causes of Death

Mortality rates, which are the number of deaths per population at risk, are used to describe the leading causes of death. Mortality rates provide a measure of magnitude of deaths within a population. Mortality rates are presented for the entire population of Region 1 and South Carolina by cause of death, as well as for infants (less than 1 year).

## The 10 Leading Causes of Death for 2005

In 2005, the leading cause of death in Region 1 was heart disease. Heart disease was also the leading cause of death for South Carolina and the United States. The top five leading causes of death for Region 1 account for an average of 3,082 deaths per year, or 64 percent of all deaths.

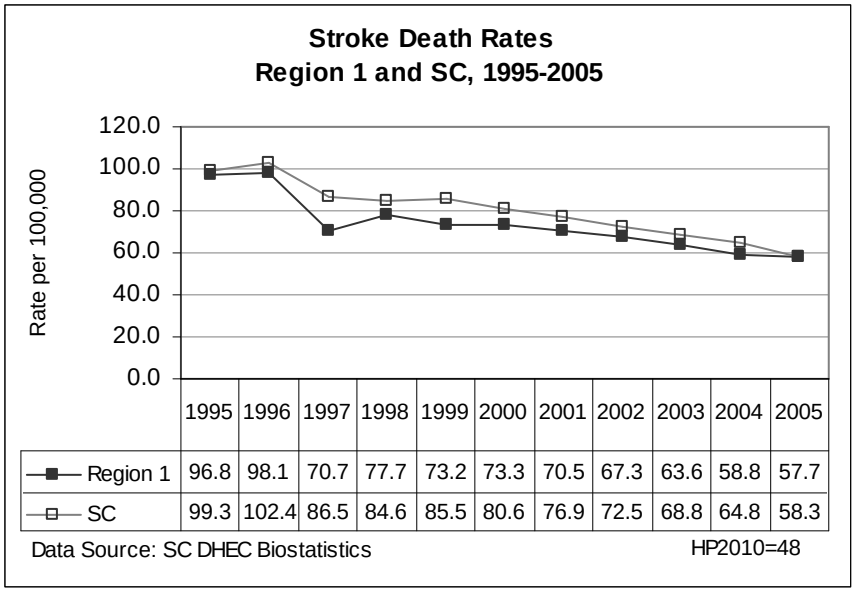



Data Source: SC DHEC Biostatistics

# Heart Disease and Stroke

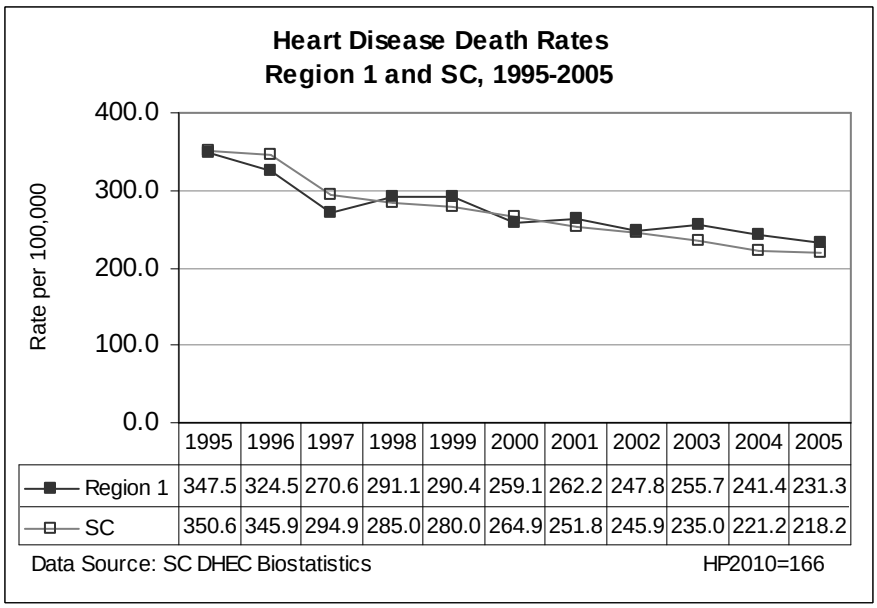
Heart disease and cerebrovascular disease (stroke), two of the principal components of cardiovascular diseases, combined account for thirty-one percent of all deaths in Region 1. Heart disease death rates for Region 1 are similar to those of the state. Both Region 1 and South Carolina have shown an overall decrease.

Stroke death rates have decreased significantly since 1995 for both Region 1 and the state. Increased awareness of the signs and symptoms of heart attack and stroke have aided in this improvement. In 2007, community efforts were aimed at increasing awareness of heart disease and stroke symptoms. Activities included training churches in the Power to End Stroke and Search Your Heart Curricula.




| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Region 1 | 96.8 | 98.1 | 70.7 | 77.7 | 73.2 | 73.3 | 70.5 | 67.3 | 63.6 | 58.8 | 57.7 |
| SC | 99.3 | 102.4 | 86.5 | 84.6 | 85.5 | 80.6 | 76.9 | 72.5 | 68.8 | 64.8 | 58.3 |

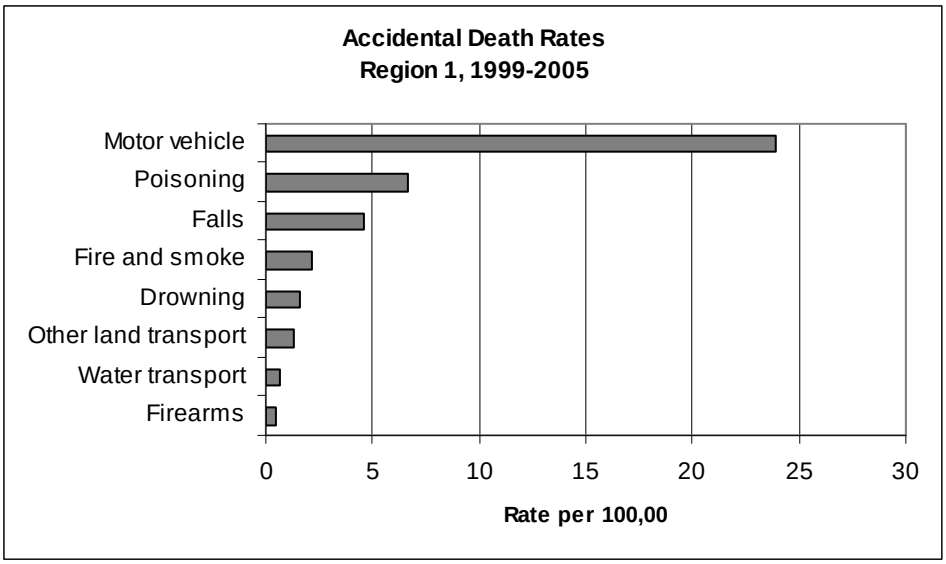
Data Source: SC DHEC Biostatistics HP2010=48




| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Region 1 | 347.5 | 324.5 | 270.6 | 291.1 | 290.4 | 259.1 | 262.2 | 247.8 | 255.7 | 241.4 | 231.3 |
| SC | 350.6 | 345.9 | 294.9 | 285.0 | 280.0 | 264.9 | 251.8 | 245.9 | 235.0 | 221.2 | 218.2 |

Data Source: SC DHEC Biostatistics HP2010=166

Identifying risk factors such as smoking, high blood pressure, obesity, and inactivity, as well as addressing health disparities in the region, can further improve overall vascular heart.




## Accidents

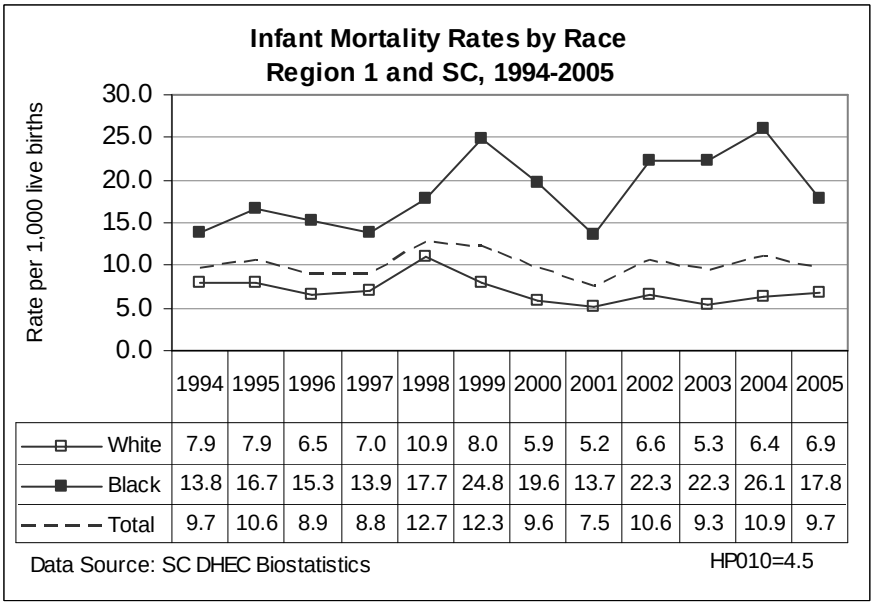
From 1999-2005, motor vehicle crashes caused the majority of accidental deaths in Region 1 and South Carolina. The second leading cause of accidental deaths was poisoning for Region 1. Among the elderly, falls are the leading cause of accidental death, and among children, motor vehicle crashes. From 1994 to 2005, the accidental death rates for the Region have remained the same, varying little year to year.

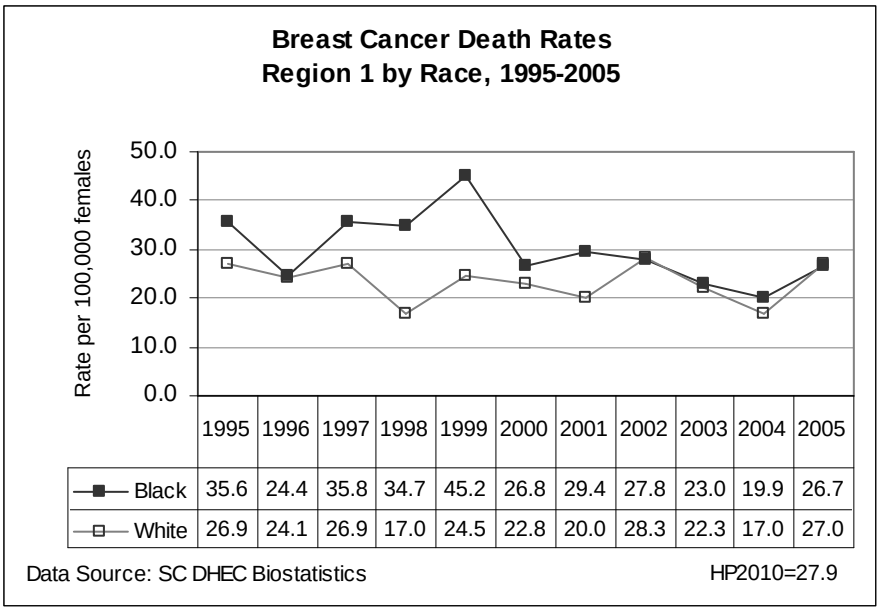
# Goal: Eliminate Health Disparities

The second goal of Healthy People 2010 is to eliminate health disparities among specific sections of the population, including differences that occur by gender, race or ethnicity, education, income, or geographic location. This section highlights ways in which health disparities can occur among various demographic groups in the region.

## Infant Mortality by Race

Racial disparities in infant mortality rates for Region 1 mirror the disparities evident in the state of South Carolina and the entire United States. From 1994 to 2005, there was an average of 18.6 black infant deaths per 1,000 live births and 7.0 white infant deaths per 1,000 live births. The infant mortality rates for black infants were more than twice that of the white infants. Because of small numbers of deaths to Asian and Hispanic infants, a detailed analysis of these groups is not possible. Unintentional pregnancies, infections, unhealthy lifestyle behaviors, and poor prenatal care increase the risk of infants dying before their first birthday. Racial disparities remain a significant concern for Region 1; however, programs such as WIC (Women, Infants, and Children), family planning, prenatal classes, and newborn home visits help address these disparities. The Infant Mortality Task group of Region 1 hopes that by focusing its efforts the racial disparity will decrease.



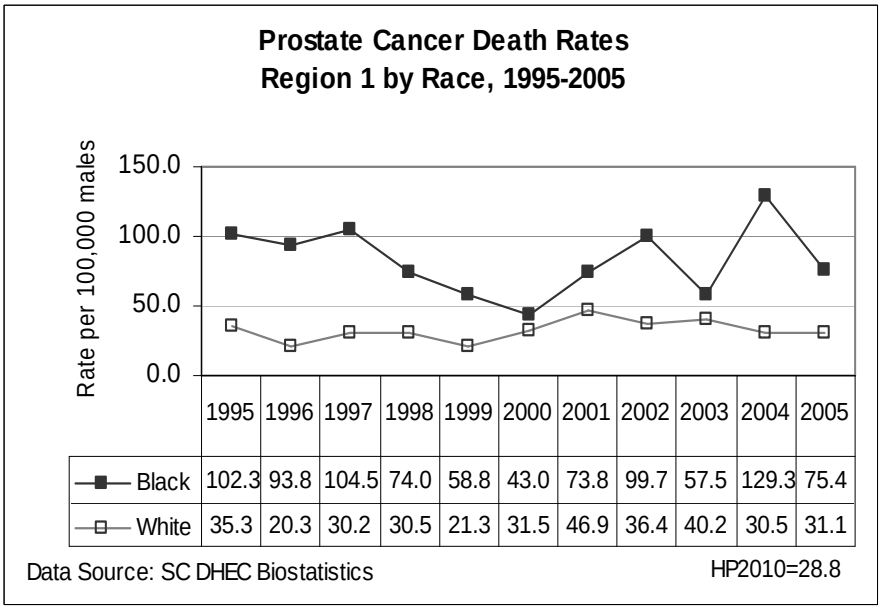



## Breast Cancer by Race

Breast cancer, the second leading cause of cancer in females, killed 80 women in 2005 in Region 1. There are marked disparities in death rates by race, although in the last 3 years, the gap between races has closed. Campaigns targeted at reducing death rates in African Americans have been successful in reducing the death rates in the population.

## Prostate Cancer by Race

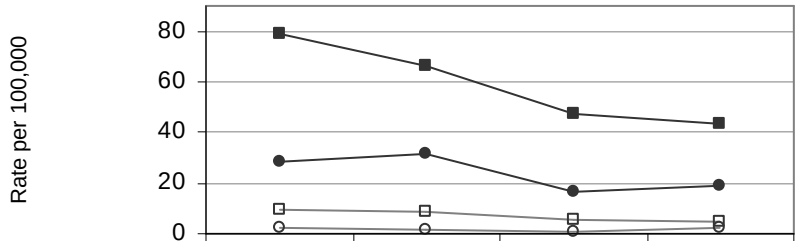
The second leading cause of cancer deaths in 2005 for men in Region 1 was prostate cancer. Racial disparities in men who die from prostate cancer have continued to plague our community despite increased cancer screening efforts aimed at African Americans. In 2005, two and half times more black men died of prostate cancer than white men. Lack of access to regular medical care contributes to the increased prostate cancer death rates in black men. By providing free education and cancer screening to the community, we hope that early detection of the cancer will decrease death rates and alleviate racial disparities.



## HIV/AIDS by Race

From 2003-2005, 148 new cases of HIV/AIDS were diagnosed in Region 1. Fewer cases are diagnosed today than a decade ago, but more people are living with HIV/AIDS than before due to new treatments and care services. The black population in Region 1, as in the state of SC, experiences a higher incidence of the disease than white men and women. Black males have the highest incidence of HIV/AIDS, nine times that of white males. Region 1 has taken giant steps in decreasing the disparity between races in the last six years, decreasing the incidence in black men and women by half compared to over a decade ago.

**New HIV/AIDS Case Rates in Region 1, by Race/Gender**



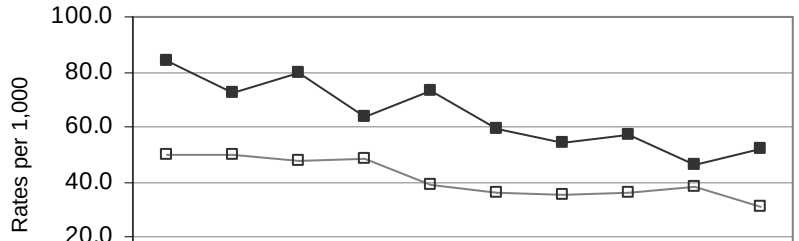

| | 1994-1996 | 1997-1999 | 2000-2002 | 2003-2005 |
|---|---|---|---|---|
| White Male | 9.5 | 8.6 | 5.3 | 4.9 |
| Black Male | 78.8 | 66.4 | 47.1 | 43.7 |
| White Female | 2.7 | 1.2 | 0.8 | 2.6 |
| Black Female | 28.3 | 31.4 | 16.6 | 18.7 |

Data Source: SC DHEC HIV/AIDS Surveillance

## Teen Pregnancy by Race

Teen pregnancy rates continue to decrease for both black and white women in Region 1. Black teens, however, continue to experience higher pregnancy rates than white teens. The disparity between the races continues to decrease in our region. Since 1996, teenage pregnancy rates among black women have decreased by nearly half. Efforts targeted at young black women should persist to further the decreasing rates in this population.

**Teenage Pregnancy Rates by Race, Ages 15-17 Region 1, 1996-2005**

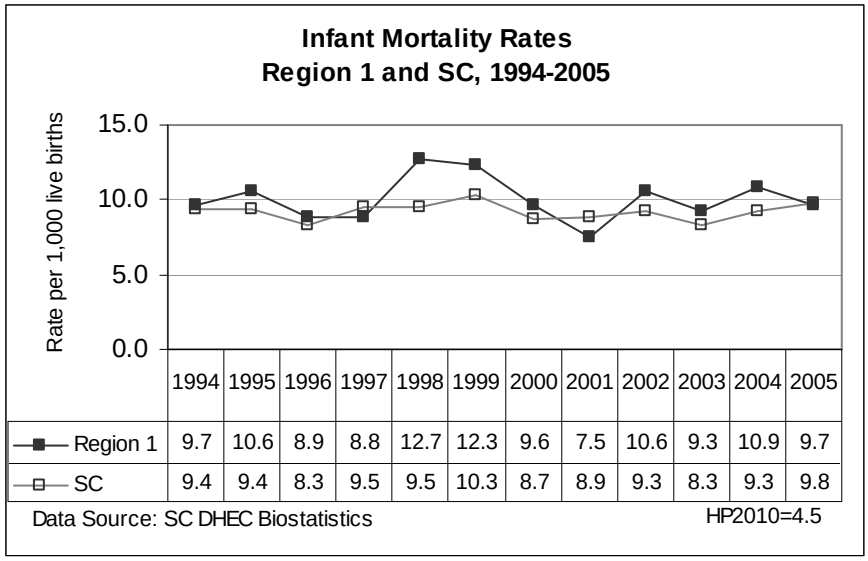



| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|---|---|---|
| Black | 84.3 | 72.8 | 79.6 | 64.1 | 73.0 | 59.3 | 54.4 | 57.3 | 46.1 | 52.0 |
| White | 50.0 | 50.1 | 48.1 | 48.3 | 39.0 | 36.3 | 35.5 | 36.0 | 38.2 | 31.1 |

Data Source: SC DHEC Biostatistics HP2010=43

# Goal: Improve Maternal and Child Health

The health of mothers, infants, and children reflects the current health status of a large sector of the population and is the primary predictor of the health of the next generation.




| | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Region 1 | 9.7 | 10.6 | 8.9 | 8.8 | 12.7 | 12.3 | 9.6 | 7.5 | 10.6 | 9.3 | 10.9 | 9.7 |
| SC | 9.4 | 9.4 | 8.3 | 9.5 | 9.5 | 10.3 | 8.7 | 8.9 | 9.3 | 8.3 | 9.3 | 9.8 |

Data Source: SC DHEC Biostatistics HP2010=4.5

## Infant Mortality—Region vs. State

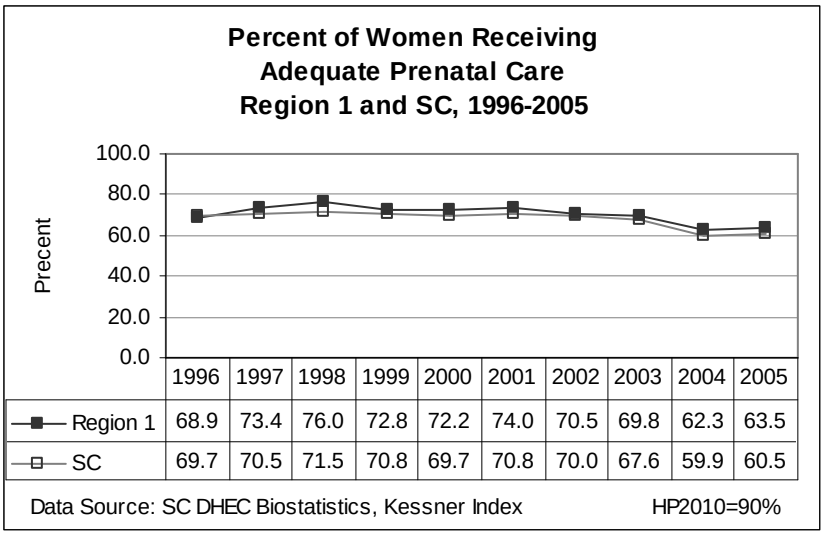
Infant mortality is used to compare the health and well-being of populations across and within countries and is commonly included as a part of standard of living evaluations. The infant mortality rate (IMR) is the rate at which babies less than one year of age die. In 2004, South Carolina had the fourth highest infant mortality rate in the United States with a rate of 9.3 deaths per 1,000 live births. The IMR of Region 1 has remained consistently higher than that of the state of South Carolina. Region 1's infant mortality rate has slightly decreased in the last 12 years from 10 deaths per 1,000 live births in 1992 to 9.7 in 2005. Programs such as Women, Infants, and Children (WIC) improve the health of nutritionally at-risk women, infants and children in an effort to decrease the number of fetal and infant deaths.

Region 1 has implemented the Fetal and Infant Mortality Review (FIMR), a community tool to assess and plan for improvements in the maternal and child health service system. By reviewing individual cases, the FIMR team is able to identify factors that may represent problems in systems of care surrounding pregnancy and areas where changes are needed. The ultimate goal of this program is to prevent infant mortality and morbidity.

In 2006, Region 1 established an Infant Mortality Taskforce which has aggressively collected information from statistical data, community input through Focus groups, and medical, social, and environmental facts abstracted by the FIMR process. Analysis of this data has guided the task force to focus on four priority areas of risks: pregnancy-induced hypertension, smoking, SIDS, and unsafe sleeping practices and behaviors.

## Women with Adequate Prenatal Care —Region vs. State

The National Center for Health Statistics defines adequate care as having one's first prenatal visit with a health professional within the first trimester of pregnancy and additional visits as recommended. The receipt of adequate prenatal care is associated with improvements in pregnancy outcome, particularly a reduction in the risk of low birth weight. Region 1 has slightly higher percentages of women receiving adequate prenatal care than that of SC.



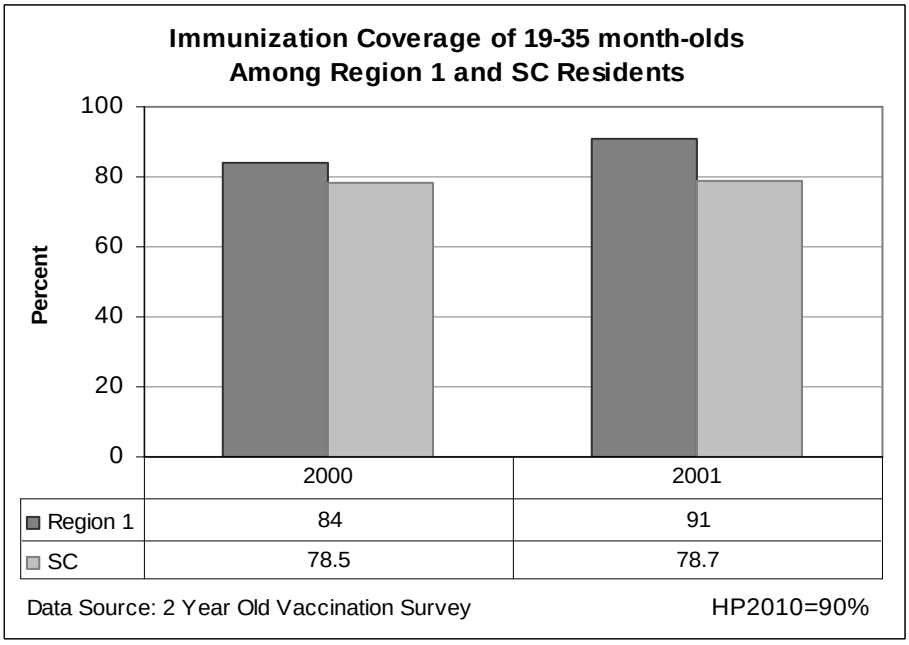

| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|---|---|---|
| Region 1 | 68.9 | 73.4 | 76.0 | 72.8 | 72.2 | 74.0 | 70.5 | 69.8 | 62.3 | 63.5 |
| SC | 69.7 | 70.5 | 71.5 | 70.8 | 69.7 | 70.8 | 70.0 | 67.6 | 59.9 | 60.5 |

Data Source: SC DHEC Biostatistics, Kessner Index HP2010=90%

Part of prenatal care should be counseling women to quit smoking during pregnancy. Region 1 is participating in the "Fresh Air for Baby and Me 2" project funded by a grant from the March of Dimes. March 2007 was the beginning of our second year of funding for this program. The project focuses on training local medical professionals within Region 1 on the Public Health Service's Clinical Practice Guideline, Treating Tobacco Use and Dependence, also known as the 5A's.

## Immunizations — Region vs. State

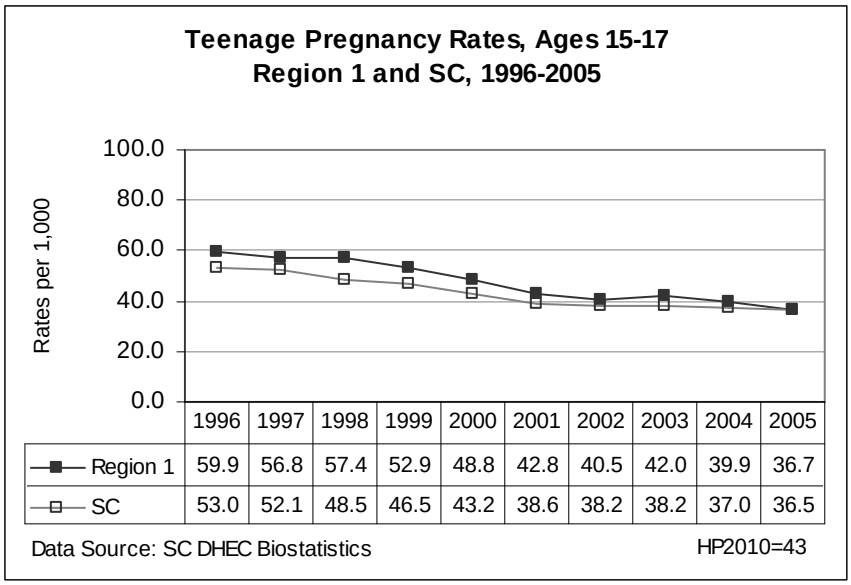
South Carolina's Department of Health and Environment Control tracks immunizations of children between the ages of 19 and 35 months of age. Vaccines are among the greatest public health achievements of the 20th century. Immunizations can prevent disability and death from infectious diseases for individuals and can help control the spread of infections within communities. For the region, vaccination coverage levels of 90 percent are vital to prevent circulation of viruses and bacteria-causing vaccine-preventable diseases.




| | 2000 | 2001 |
|---|---|---|
| Region 1 | 84 | 91 |
| SC | 78.5 | 78.7 |

Data Source: 2 Year Old Vaccination Survey HP2010=90%

Region 1 coverage rates in 2001 surpassed that of the Healthy People 2010 goals and are overall higher than those of the state for both 2000 and 2001. Higher coverage rates could significantly decrease the incidence of these diseases in our communities.




## Teen Pregnancy — Region vs. State

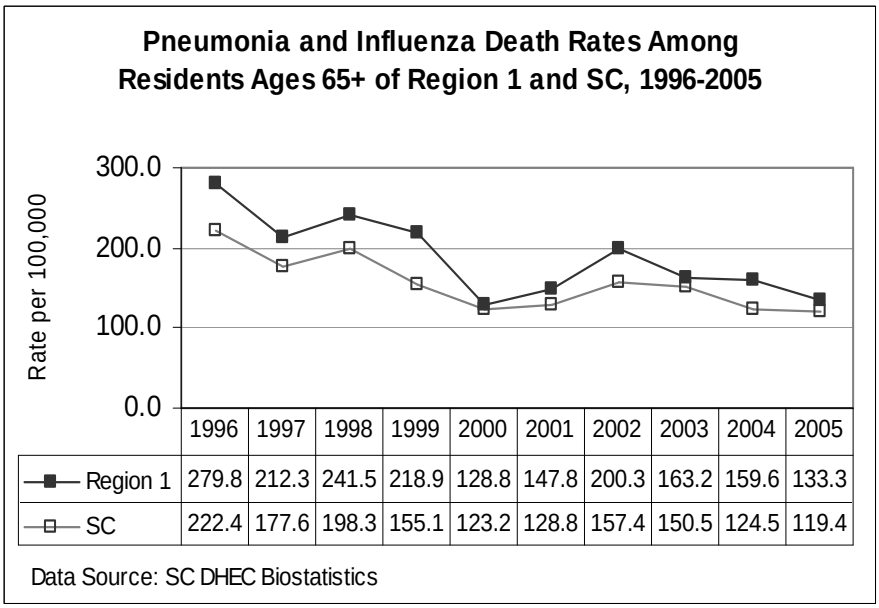
Teen pregnancy rates in Region 1 and in SC are lower than those of the United States. Region 1's rates are currently lower than the HP2010 goal of 43 per 1,000, but teen pregnancy remains a concern for the community. Teen pregnancy is one of the most strategic and direct means available to improve overall child well-being and to reduce persistent child poverty. Adolescents who have babies face serious health risks. Common medical problems among adolescent mothers include poor weight gain, pregnancy-induced hypertension, anemia, and sexually transmitted diseases (STDs). Later in life, adolescent mothers tend to be at greater risk for obesity and hypertension than women who were not teenagers when they had their first child. Teen pregnancy prevention programs must target the whole community: teens, parents, schools, and faith based organizations. Programs such as the Teen Clinic in Anderson are vital to decreasing teen pregnancy rates.

# Goal: Improve the Quality of Life for Seniors

The senior population is the fastest growing age group of Region 1. Medical advancements in the last century have added many years to our lives, but we must ensure that these are healthy years. Disease and disability should not be unavoidable consequences of growing old.

## Pneumonia and Influenza

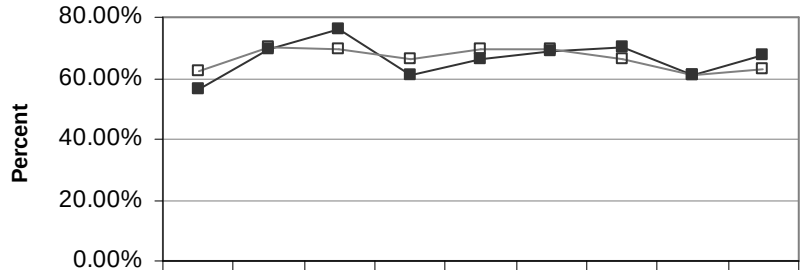
Influenza and Pneumonia combined are the eighth leading cause of death in Region 1 and in South Carolina. The death rates for Region 1 due to influenza and pneumonia have decreased by fifty percent since 1995. Vaccinations are the primary reason for this decrease. Ensuring the senior population receives the one-time dose of pneumonia vaccine and annual flu shots will prevent these diseases and their life-threatening complications.



## Vaccine Coverage for Pneumonia and Influenza

Almost 70 percent of the adult population surveyed in the 2006 Behavior Risk Factor Surveillance System (BRFSS) for Region 1 reported receiving a flu shot in the last 12 months, higher than that of the state. The influenza vaccine coverage for this senior population has been increasing since 1998, achieving significant progress in decreasing deaths attributed to influenza. The last two years have seen a slight decrease in reported influenza vaccine for seniors. Ensuring influenza vaccination rates continue to increase is vital to protecting the health of our seniors.

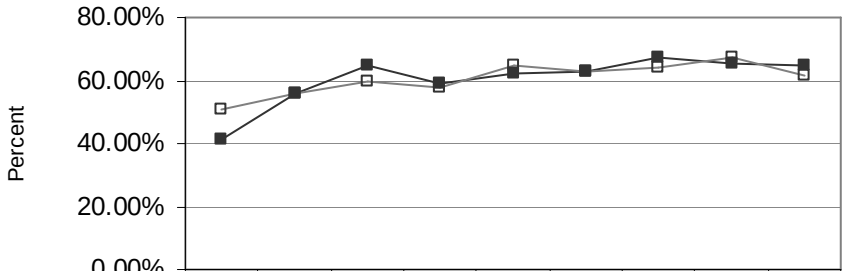
**Prevalence of Influenza Vaccine Among Region 1 and SC Residents Ages 65+**




| | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|---|---|---|---|---|---|---|---|---|---|
| Region 1 | 56.50 | 69.40 | 76.10 | 61.20 | 66.30 | 68.90 | 69.90 | 61.00 | 67.40 |
| SC | 62.50 | 69.90 | 69.70 | 66.20 | 69.40 | 69.30 | 66.00 | 60.90 | 62.90 |

Data Source: SC BRFSS

**Prevalence of Pneumonia Vaccine (ever) Among Region 1 and SC Residents Ages 65+**




| | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|---|---|---|---|---|---|---|---|---|---|
| Region 1 | 41.10 | 55.90 | 64.50 | 58.90 | 62.00 | 62.70 | 67.30 | 65.60 | 64.80 |
| SC | 50.70 | 56.10 | 59.70 | 57.90 | 64.90 | 63.00 | 64.00 | 67.30 | 61.50 |

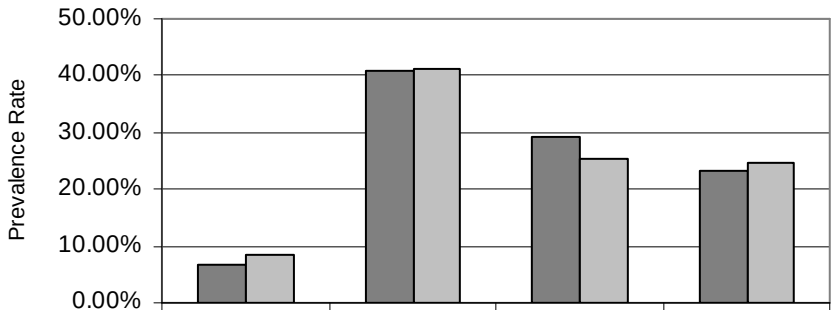
Data Source: SC BRFSS

For pneumonia vaccine, coverage has increase from 41 percent in 1998 to 65 percent in 2006. The pneumonia vaccine is a single dose vaccine recommended every five years for people ages 65 and older. In 2006, Region 1 amplified the annual vaccination campaign for pneumonia and influenza, targeting the elderly population. Increased mass vaccination clinics have had a substantial impact on our vaccination coverage in Region 1.

# Diabetes

Diabetes is a disease in which the body does not produce or properly use insulin, a hormone needed to change sugar into energy. In Region 1, deaths attributed to diabetes have been rising since 2001, but remain lower than the healthy people goal of 45 deaths per 100,000. Sixty-six percent of diabetes deaths in Region 1 occur in people age 65 and greater, 84 percent of deaths occur in those 55 and greater.

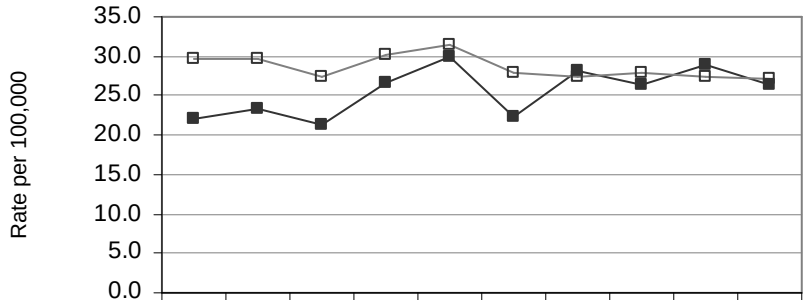
**Diabetes Prevalence in 2006**
**Region 1 and SC by Age Group**




| | <30 | 30-50 | 50-60 | 60+ |
|---|---|---|---|---|
| Region 1 | 6.60% | 40.70% | 29.40% | 23.30% |
| SC | 8.60% | 41.30% | 25.40% | 24.70% |

Data Source: SC BRFSS

**Diabetes Death Rates**
**Region 1 and SC, 1996-2005**




| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|---|---|---|
| Region 1 | 22.1 | 23.3 | 21.3 | 26.6 | 29.9 | 22.4 | 28.1 | 26.3 | 29.0 | 26.5 |
| SC | 29.8 | 29.6 | 27.4 | 30.3 | 31.4 | 28.0 | 27.5 | 28.0 | 27.5 | 27.1 |

Data Source: SC DHEC Biostatistics HP2010=45

The prevalence of diabetes or the number of people currently living with diabetes has been increasing in the last decade. The majority of those diagnosed are the senior population and those ages 50 and older. Of those who report having been diagnosed with diabetes, over 23 percent are Region 1 seniors and over 40 percent are those aged 30-50. These populations must be targeted to reduce the prevalence of diabetes and attributable deaths. Region 1 has a higher prevalence rate for diabetes than the state and to address this growing concern a Diabetes Task Group was formed to create a logic model and action plan. The components of the action plan are prevention and promotion, care and treatment, and lifestyle support. The aim is to target Saluda, Edgefield, and McCormick counties with the action plan including Diabetes 101 training for local citizens, targeting physicians to adopt American Diabetes Association (ADA) standards, and promoting the Body and Soul program in the faith community. The priority component of the diabetes action plain is care and treatment of diabetes with the long-term outcome of longer and healthier life expectancies for persons with diabetes and a decrease in health disparity. Just 30 minutes a day of moderate physical activity, coupled with a 5-10 percent reduction in body weight can prevent or delay the onset of Type 2 diabetes.